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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)	
3638-896 (AMK) Confirmation No. 2311	
Application Number	Filed
10/594,666	September 28, 2006
First Named Inventor	
Campbell	
Art Unit	Examiner
3634	D. Cahn

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ Applicant/Inventor

☐ Assignee of record of the entire interest. See 37 C.F.R. § 3.71. Statement under 37 C.F.R. § 3.73(b) is enclosed. (Form PTO/SB/96)

☒ Attorney or agent of record 36,178 (Reg. No.)

☐ Attorney or agent acting under 37CFR 1.34.
Registration number if acting under 37 C.F.R. § 1.34 _____

/Alan M. Kagen/
Signature

Alan M. Kagen
Typed or printed name

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Requester's telephone number

September 2, 2010
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.*

☒ *Total of 1 form/s are submitted.

Claim 20 is not unpatentable under 35 U.S.C. §102(b) over U.S. Patent No. 3,752,263 to Thevenot, nor is claim 20 unpatentable under 35 U.S.C. §103(a) over Thevenot. Moreover, claims 1, 2, 4-6, 17 and 18 are not unpatentable under 35 U.S.C. §103(a) over Thevenot.

As recognized in the Office Action, Thevenot lacks at least the claimed machine weight of the mast lift being less than 200 pounds. The Office Action contends, however, that this feature of the invention "would have been an obvious matter of design choice." To the contrary, machine weight cannot be simply arbitrarily "designed," but rather is a function of an assembly of materials capable of performing intended functionality. This standard is even more difficult to accomplish when considering safety regulations for such devices. When considering the weight of machine components, it is not merely "design choice" for a manufacturer to simply select the weight of the assembled components.

The Office Action further contends that "discovering an optimum weight would have been a mere design consideration," and that "such a modification would have involved only routine skill in the art to accommodate different weight requirements depending on the desired characteristics of the mast." Appellants respectfully submit, however, that substantial engineering input was required in order to achieve the defined weight requirement of the invention.

The prescribed motivation of making the mast "as light as possible simply to make its transport easier" is idealistic but structurally impossible with the Thevenot structure. Indeed, the motivation for such a conclusion could only be derived from Appellants' own specification, and such hindsight is insufficient to support a conclusion of obviousness. The Office Action is confusing an obviously desirable feature (low weight and portability) with structural obviousness. The materials disclosed in the Thevenot structure, however, cannot be ignored.

Appellants believe they have achieved significant advantages over all existing systems by constructing the claimed mast lift within a specified weight parameter, and Appellants submit that the dismissal of this important feature of the invention as merely obvious is entirely misplaced.

Although Thevenot is silent with regard to machine weight, an analysis of the Thevenot structure reveals that using even the lightest materials available, the Thevenot structure would weigh considerably more than 200 pounds. Appellants conducted an analysis of the Thevenot structure, and from this analysis, it is clear that the device disclosed in the Thevenot patent could not be modified to meet claimed 200 pound parameter. The device disclosed in the Thevenot patent using steel would weigh over 650 pounds, and using aluminum materials, the Thevenot device would weigh at a minimum approximately 300 pounds. The data used to support this analysis is attached as Appendix A. For proper comparison and without limiting the claims of the present application, the data was based on structure in the Thevenot patent to reach a height of a 14-foot platform. The calculated weight amounts do not include many of the parts shown, which of course would add further weight to the Thevenot structure.

In the "Response to Arguments" section of the Office Action, the Examiner questions the data in the Appendix A table. Appellants note that the table is structured in a manner that would *minimize* the weight of the Thevenot structure – i.e., Thevenot would weigh *at least* as much as identified in the table; in reality, the structure would weigh much more. Even under these conditions, the Thevenot structure could not have been modified to meet the weight criteria defined in the claims, whether built in steel or aluminum. Clearly, any such analysis cannot exactly calculate the weight from the Thevenot information available – so assumptions and simplifications are necessary. The analysis does however show that it would not have been

obvious to do what Appellants have done based on Thevenot. Appellants have rebutted the Examiner's contentions with data and analysis, whereas the Examiner simply disregards or dismisses the data and concludes without basis that it would have been obvious to reconstruct the Thevenot design to meet the claimed weight requirements. Since Appellants believe they have rebutted any prima facie case of obviousness, the burden shifts back to the Examiner. In the present case, the Examiner only dismisses Appellants' analysis without re-establishing a prima facie case of obviousness.

With regard to the height, Appellants made the height equivalent to take this out of the debate. There is a note to this effect at the top of the table. Actually the higher the unit, the more the claimed invention comes out ahead as extra height on the claimed design adds only a few pounds per foot of height.

With regard to using different types of Aluminum and steel of different densities, Appellants respectfully question if the Examiner really understands what is represented in the table. The variation in Aluminum densities is very small across a wide range of alloys in normal use. The table assumes a density of 2.7 kg/m^3 which is a very common/standard density. For the Examiner's reference, Alcan Inc obtained a patent on an Aluminum alloy based on its light weight properties. The alloy is the so-called low density 6056 aircraft Aluminum alloy:

> An Al-Mg-Si-Cu-Mn weldable aerospace alloy developed to provide medium strength similar to that of the incumbent 2024 alloy with a lower density patented by Alcan Inc., Montreal, Quebec. Density of aluminium 6056 is 2.72 kg/m^3 (0.098 lb/in^3); density of aluminum 2024 is 2.78 kg/m^3 (0.100 lb/in^3).

While Appellants agree there may be lower weight materials, the variation in real world materials is minor on what has been used. The Examiner's reference to alloys such as titanium

and magnesium are without basis as no data to support these contentions is provided. If desirable, Appellants will limit the claims to aluminum or steel construction.

Notwithstanding, for at least the reasons discussed above, Appellants submit that the rejections should be withdrawn.

Thevenot Lift Weight Analysis GGC March 2010 APPENDIX A

Shown for construction in Steel and also if structure was Aluminium

14ft height

Notes: The Thevenot unit is neither light weight nor portable.

Part	Part No.	Area 1	Area 2 if composite shape	Total Length	Quantity	Volume = (A1+A2)x Length	Weight Assuming Steel Construction (Kg)	Weight Assuming Aluminium Construction (Kg)
Tower verticals - L shape	39 & 15A - 4 of	0.0003	0.0003	4.2672	4.0	0.0085	65.71	23.04
Tower horizontal - L shape	17 - 4 per level, 5 level	0.0003	0.0003	0.4800	20.0	0.0048	36.96	12.96
Tower angle braces	16 - 4 per side, 4 sides	0.0001	0.0000	0.4800	16.0	0.0010	7.39	2.59
Base frame - sides	10	0.0002	0.0005	1.4000	2.0	0.0020	15.09	5.29
Base frame - lengths	11	0.0002	0.0005	2.0000	2.0	0.0028	21.56	7.56
Platform rails	21,20,22,28,24	0.0003		1.0000	14.0	0.0045	34.50	12.10
Motor Platform	28,22	0.0006		3.0000	1.0	0.0018	13.86	4.86
Rollers for platform to travel	24,25	0.0079		0.0030	8.0	0.0002	1.45	1.45
Coupling	28	0.0079		0.1000	1.0	0.0008	6.05	6.05
Motor	27						15.00	15.00
Bolts (18)							3.60	3.60
Roller Frame	24A	0.0015	0.0005	1.0000	2.0	0.0040	30.80	10.80
Platform wood (assumed)	19						5.00	5.00
Cross rails	17A	0.0003	0.0003	0.5000	4.0	0.0010	7.70	2.70
Chain Pinions	33,34	0.0079		0.0020	3.0	0.0000	0.36	0.36
Chain	39 @ 1kg per metre				8.0000		8.00	8.00
Emergency Brake	26						15.00	10.00
Rollers at base of device	15	0.0177		0.0500	2.0	0.0018	13.61	4.77
Cable for power to platform	Not incl						Not incl	Not incl
Other parts	Not incl						Not incl	Not incl

Total Weight of Design

301.65	136.14	Kg
665.02	300.13	Pounds

NOTE: Dimensions of each part has been estimated using a scale taken by assuming a 40 inch high platform rail. Areas and volumes have been calculated by hand to ensure as much accuracy as possible for the estimate. Note that many parts have not been included in the Thevenot unit weight - so the total weight is likely to be well above that noted here. The key point is that even if the Thevenot unit was constructed in aluminium, it would weigh well in excess of 200lb, and it is not 'portable' in a meaningful way. The JLG mast lift machine is much lower weight than Thevenot (even if Thevenot is made from aluminium), and is truly portable while meeting modern safety standards.